Listing of Claims:

Claims 1-27 (Canceled).

28. (New) A laser microscope which irradiates a sample with a laser light including laser lines of different emission wavelengths, comprising:

a light source to emit the laser light;

a spectral resolution section to spectrally resolve the laser light into lights of the different emission wavelengths;

a light receiving element array to receive the lights simultaneously and to output a detection signal that includes light intensity information of the lights; and

a controller to simultaneously control light intensities of the respective laser lines based on the detection signal.

29. (New) The laser microscope according to claim 28, further comprising an acousto-optical element fixed to an output end of the laser source to alter the light intensities of the laser lines, wherein the acousto-optical element receives a control signal outputted from the controller.

30. (New) The laser microscope according to claim 29, wherein the controller controls the acousto-optical element to

control the respective light intensities of the laser lines to be constant.

31. (New) The laser microscope according to claim 28, wherein the light source comprises one laser light source that emits the laser light including the laser lines of the different emission wavelengths.

32. (New) The laser microscope according to claim 28, wherein the light source comprises a plurality of laser light sources that emit laser lights of different emission wavelengths.

33. (New) The laser microscope according to claim 28, wherein the spectral resolution section comprises one of a prism, a diffraction grating or a beam splitter.

34. (New) The laser microscope according to claim 28, wherein the light receiving element array comprises one of a split photodiode and a solid-state image sensing device.

35. (New) The laser microscope according to claim 28, further comprising a converging lens that is disposed between the spectral resolution section and the light receiving element array;

wherein the spectral resolution section comprises a prism, the light receiving element array comprises a one-dimensional CCD which receives the laser lights of the different emission wavelengths, and the converging lens converge the lights of the different emission wavelengths resolved by the prism on the one-dimensional CCD.

36. (New) The laser microscope according to claim 28, further comprising:

an optical fiber to transmit the laser light from the laser source;

a collimator lens to collimate the laser light emitted from the optical fiber;

a beam splitter to split the laser light collimated by the collimator lens and to guide a part of the split laser light to the spectral resolution section; and

a converging lens to converge the lights of the different emission wavelengths on the light receiving element array.

37. (New) The laser microscope according to claim 36, wherein the collimator lens, the beam splitter, the spectral resolution section, the converging lens, and the light receiving element array are formed in a single block, and the block is

attached to and detachable from a main body of the laser microscope.

38. (New) The laser microscope according to claim 28, wherein the sample is marked with fluorescent markers, the emission wavelengths of the laser lines of the laser light are suitable to cause the marked sample to emit a plurality of fluorescent lights, and the laser microscope detects the plurality of fluorescent lights emitted from the sample.

39. (New) The laser microscope according to claim 38, wherein the sample is dyed with a plurality of fluorescent indicators, and the emission wavelengths of the laser lines are excitation wavelengths of the fluorescent indicators.